REMARKS

The above amendments to the above-captioned application along with the following remarks are being submitted as a full and complete response to the Office Action (Paper No. 041904) dated May 18, 2004. In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

Status of the Claims

Claim 1-10 were pending in this application. Of these, claims 2-10 were withdrawn and claim 1 stood rejected. Claim 1 has been amended to clarify the invention. New claims 11 and 12 have been added.

Support for the new claim 11 can be found in the specification, for example, at page 7, line 21 through page 8, line 23. Support for the new claim 12 can be found in the specification, for example, at page 11, lines 1-3 and in Figure 2. No new matter is added.

The specification has been amended to add the priority claim and delete hyperlinks embedded in the text of the specification, and to correct obvious typographical errors. No new matter is added by these amendments to the specification.

Rejection Under 35 U.S.C. § 112

Claims 1 stands rejected under 35 U.S.C. § 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Specifically, the Examiner has asserted that the phrase "chains to the said genes" or "chain" causes the claim to be vague and indefinite. Applicant believes that entry of the amendment to claim 1 overcomes this portion of the rejection. Reconsideration and withdrawal of the rejection are respectfully requested.

The Examiner has asserted that the limitation "oligo-nucleotides" lacks antecedent basis. Applicant respectfully submits that it has elected to make clarifying amendments to claim 1 and believes that these amendments overcome the rejection. Reconsideration and withdrawal of the rejection are respectfully requested.

Finally, the Examiner has asserted that the phrase "the fixation region on the support substrate is divided into the said classification" causes the claim 1 to be vague and indefinite. Applicant believes that entry of the amendment to claim 1 overcomes this portion of the rejection. Regarding the term "divided," recited in the last "wherein" clause of the claim 1, Applicant respectfully submits that this term simply refers to the arranged or organized, not to a mathematical division function as noted by the Examiner. The definiteness inquiry focuses on whether those skilled in the art would understand the scope of the claim when the claim is read in light of the rest of the specification. *Orthokinetics, Inc., v. Safety Travel Chairs, Inc.,* 1 U.S.P.Q. 2d 1081 (Fed. Cir. 1986). The claim 1, as amended, recites that ". . . wherein the support substrate has fixation regions divided according to said classification." The specification, specifically Figure 1 for example, shows a support substrate having fixation regions divided according to a gene function classification. See also, for example, the specification at page 35, lines 25-28. Accordingly, Applicant respectfully submits that one skilled in the art would understand the metes and bounds of the claim when read in light of the specification. Reconsideration and withdrawal of the rejection are respectfully requested.

Rejection Under 35 U.S.C. § 103

Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Watson et al., 1999, Biol. Psychiatry, 45:533-543 ("Watson") in view of Schena et al., 1996, Proc. Nat. Acad. Sci., USA, 93:10614-10619 ("Schena").

This rejection is respectfully traversed and believed overcome in view of the following discussion:

If all the elements of an invention are found in a combination of prior art references, a proper analysis under 35 U.S.C. § 103 requires, inter alia, consideration of two factors: (1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed device and (2) whether the prior art would also have revealed that in so making, those of ordinary skill would have a reasonable expectation of success. *Velander v. Garner*, 348 F.3d 1359 (Fed. Cir. 2003).

The Examiner asserts that Watson discloses all the limitations of claim 1 except oligonucleotides are classified according to their gene functions and the fixation regions on the support substrate, and Schena discloses the limitations missing from Watson.

Watson teaches an oligonucleotide array and an example of searching for genes encoding differential responsiveness to stress using the array. Watson, however, is deficient in that it does not teach or suggest, among other things, an oligonucleotide array with multiple oligonucleotides wherein the multiple oligonucleotides are classified according to their gene functions or an oligonucleotide array having a support substrate containing fixation regions divided according to classification of gene functions.

The secondary reference, i.e., the Schena reference, fails to remedy the deficiencies of the Watson reference. More specifically, Schena teaches DNA chips wherein microarrays containing cDNAs of unknown sequence were printed on glass. See ABSTRACT of Schena. In Fig. 2, Schena discloses a microarray with rows and columns and hybridization signals (fluorescence). Schena characterizes cDNAs that displayed differential expression patterns based on the assumptions drawn from Blast search. See, the text following the Table 1 on page 10616, where Schena discloses that "[c]lones showing >98% identity over 300 nucleotides were assumed to be identical to known sequences." Thus, Schena uses a microarray containing unknown cDNAs with unknown functions and makes assumptions as to the identity of cDNAs. Nowhere does Schena, however, teach or suggest an oligonucleotide array with multiple oligonucleotides wherein the "multiple oligonucleotides are classified according to their gene functions." Further, Schena does not teach or suggest a support substrate having fixation regions divided according to classification of gene functions.

Even if the teachings of the cited references are combined, one cannot arrive at the claimed invention because all the elements of the claimed invention are not found in the cited combination of prior art references and the combination does not suggest an oligonucleotide array with multiple oligonucleotides wherein the multiple oligonucleotides are classified according to their gene functions or an oligonucleotide array having a support substrate containing fixation regions divided according to classification of gene functions.

Accordingly, Applicant respectfully submits that the Examiner has not established a *prima facie* case of obviousness of claim 1, based on the combination of Watson and Schena, under 35 U.S.C. § 103(a). Reconsideration and withdrawal of this rejection are respectfully requested.

Conclusion

In view of all the above, Applicants respectfully submit that certain clear and distinct differences as discussed exist between the present invention as now claimed and the prior art references upon which the rejections in the Office Action rely. These differences are more than sufficient that the present invention as now claimed would not have been anticipated nor rendered obvious given the prior art. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable reconsideration of this application as amended is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicant's undersigned representative at the address and telephone number indicated below.

Respectfully submitted,

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